

APPENDIX I

KILLER JUNIOR

I-1. DESCRIPTION

The following description of killer junior is given by Major General David Ewing Ott in *Vietnam Studies, Field Artillery, 1954-1973* (Washington, D.C., US Government Printing Office, 1975), page 61, paragraph 4:

"Another effective direct fire technique was Killer Junior. The technique was designed to defend fire bases against enemy ground attack and used mechanical time-fuzed projectiles set to burst approximately 30 feet off the ground at ranges of 200 to 1,000 meters." "This technique proved more effective in many instances than direct fire with Beehive ammunition because the enemy could avoid Beehive by lying prone or crawling. Another successful application of the Killer technique was in clearing snipers from around base areas. The name Killer came from the radio call sign of the battalion that perfected the technique. To speed the delivery of fire, the crew of each weapon used a firing table containing the quadrant, fuze settings, and charge appropriate for each range at which direct fire targets could be acquired."

I-2. TYPES OF TARGETS

The most likely target for which Killer Junior would be used is dismounted infantry. Careful consideration must be given to weapon positioning to maximize fields of fire, and to complement other organic or attached weapon systems.

I-3. AMMUNITION

a. Shell-Fuze Combination. Shell HE is fired with mechanical time super quick fuze M564/M582.

Note: Minimum fuze setting authorized for these fuzes is 2.0 (reference TM 43-0001-28).

b. Charges. Minimum authorized charge should be fired to facilitate the engagement of targets at close range. If the maximum charge is used, it will serve only to increase the range-to-fuze function.

I-4. PROCEDURES

a. Sighting. The three primary methods of sighting outlined in Chapter 8 are used when firing Killer Junior.

b. Firing data.

(1) 105-mm. Pocket-size firing tables for charge 1, shell HE, fuze MTSQ can be ordered through normal publication channels.

Note: These tables are incorrect in that they do not contain the warning shown below.

WARNING

Firing a fuze setting less than what corresponds to a range of 650 meters is restricted to combat emergency conditions only. Firing a fuze setting less than this value results in a danger close hazard to the crew. Also, the fuzes, except for the M577 and the M582, require about 400 meters to arm (2.0 seconds). The M577 and M582 fuzes, when set for a time of less than 4 seconds, will allow the fuze rotor to release almost immediately. This fully arms the fuze, which enables the fuze to explode at the set time. Any time setting of less than 2 seconds is a danger to the crew and should not be fired unless firing Killer Junior.

(2) 155-mm. Direct fire tables are not available in current firing tables; therefore, battery personnel must compute the data. The data are produced for quadrant elevation, fuze setting, and 10/R factor (10 divided by range in thousands) for the minimum authorized charges. The quadrant elevation, when used with the listed fuze setting, will produce an airburst of 10 meters above and before the listed range. Compute data as discussed below.

WARNING

Firing a fuze setting less than what corresponds to a range of 750 meters for 155-mm is restricted to combat emergency conditions only. Firing a fuze setting less than this value results in a danger close hazard to the crew. (Refer to AR 385-63, Chapter 11, Table 11-1.) Also, the fuzes require about 400 meters to arm (2.0 seconds). The M577 and M582 fuzes, when set for a time of less than 4 seconds, will allow the fuze rotor to release almost immediately. This fully arms the fuze, which enables the fuze to explode at the set time. Anytime setting of less than 2 seconds is a danger to the crew and should not be fired unless firing Killer Junior.

Note: For howitzers firing separate-loading ammunition, direct fire tables should be produced for both green bag and white bag propellants.

(a) Format a Killer Junior table as shown in Figure I-1. Label it with the charge to be fired. Column 1 is range in meters. Column 2 is quadrant elevation in mils. Column 3 is fuze setting. Column 4 is 10/R in mils.

SHELL HE, M107 FUZE MTSQ M564/M582		KILLER JUNIOR DIRECT FIRE		CHARGE 2	
1	2	3	4		
RANGE (METERS)	QUADRANT ELEVATION (MILS)	FUZE SETTING	10/R (MILS)		

Figure I-1. Killer Junior direct fire table format

(b) Using the appropriate firing table, enter the minimum authorized charge, Table F.

(c) Enter ranges in column 1 in increments of 100 meters from--

- The minimum range corresponding to 2.0 fuze setting for graze burst. (Example: 203mm, charge 1 green bag; minimum range used would be 500 meters).
- Maximum range is 1,500 meters.

(d) Calculate 10/R factor for listed ranges, and enter it in column 4.

Note: 10/R factor should be listed to the nearest whole mil to simplify uses for howitzer crew members.

(e) Add 10/R factor to the elevation listed in the firing table, and enter the sum to the nearest whole mil in column 2.

Note: An additional value of 10/R should be applied to compensate for each 10-meter difference in vertical interval (VI) between the target and the howitzer.

(f) Subtract 0.1 fuze setting increments from the fuze setting for graze burst. Enter that number in column 3.

EXAMPLE

You are in an M198 (155mm) howitzer firing battery. Minimum authorized charges are charge 2 green bag and charge 3 white bag. Authorized firing tables for your unit are on hand.

Step 1. Format the Killer Junior direct fire table for charge 2. (An M198 firing charge 2 may result in a round lodged in the tube or early functioning if using fuze M564.)

Step 2. Compute 10/R factor for ranges 500 to 1,500 meters. Using artillery expression, express to the nearest whole mil. Range 500 (when data are input in column 4, express to the nearest whole mil): $10/0.5=20$ mils. Range: $900\ 10/0.9 = 11.1$ mils. Range 1300 $10/1.3=7.7$ mils.

Step 3. Add 10/R factor to elevation corresponding to listed range. Using artillery expression, express to the nearest whole mil.

Range 500: $45.4 + 20 = 65.4$ or 65 mils

Range 900: $82.8 + 11.1 = 93.9$ or 94 mils

Range 1300 $121.6 + 7.7= 129.3$ or 129 mils

Step 4. Subtract 0.1 fuze setting increments from the listed fuze setting for a graze burst.

Range 500: $2.1 - 0.1 = 2.0$

Range 900: $3.8 - 0.1 = 3.7$

Range 1300: $5.6 - 0.1 = 5.5$